R E P O R T R E S U M E S

ED 017 257 JC 680 034

EDUCATION AND TRAINING SURVEY, CITY OF BEVERLY, COMMONWEALTH OF MASSACHUSETTS.

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MASSACHUSETTS HIGHER EDUC. FACILITIES COMMISSION

PUB DATE 1 DEC 67

EDRS PRICE MF-$0.50 HC-$3.36 82P.

DESCRIPTORS- *JUNIOR COLLEGES, *ADULT VOCATIONAL EDUCATION, *VOCATIONAL EDUCATION, *TECHNICAL EDUCATION, *COMMUNITY STUDY, COMMUNITY SURVEYS, OCCUPATIONAL SURVEYS, QUESTIONNAIRES, MANPOWER DEVELOPMENT, MASSACHUSETTS,

THIS SURVEY WAS MADE TO DISCOVER THE NEEDS OR WISHES OF THE CITY'S RESIDENTS FOR ADDITIONAL EDUCATION, TO PROVIDE IT IF POSSIBLE OR TO TELL THEM WHERE TO FIND IT, AND TO SEE IF THEIR WISHES ARE REALISTIC ACCORDING TO EXISTING OR ANTICIPATED EMPLOYMENT NEEDS. THE 1804 REPLIES RECEIVED FROM 30,000 QUESTIONNAIRES WERE TALLIED BY AGE, SEX, AND LEVEL OF EDUCATION. FROM THE 1000 WHO SPECIFIED A WISH FOR ADDITIONAL TRAINING, IT WAS EXTRAPOLATED THAT 1250 TO 2500 OF THE POPULATION WOULD PROBABLY BE INTERESTED. THE MAIN CONCLUSIONS WERE THAT (1) MANY PEOPLE WANTED ADDITIONAL BUSINESS AND PHYSICAL SCIENCE TRAINING, (2) FEW SHOWED ANY INTEREST IN APPLIED INDUSTRIAL ARTS, COMPUTER-RELATED TECHNOLOGY, OR TEACHING, (3) ONLY ONE PERSON EXPRESSED INTEREST IN MARINE SCIENCE, (4) NO ONE WANTED COURSES IN SOCIAL SERVICE, POLICE WORK, FIRE FIGHTING, OR RECREATION ADMINISTRATION, AND (5) FEW WANTED TO UPGRADE THEIR PRESENT KNOWLEDGE AS PLUMBERS, ELECTRICIANS, CARPENTERS, UPHOLSTERERS, CLEANERS, AND OTHER SERVICE WORKERS. THE MOTIVES OF THE RESPONDENTS FOR REQUESTING OR REJECTING POSSIBLE ADDITIONAL TRAINING WERE EXAMINED. BUSINESSMEN AND EDUCATORS COULD WELL WORK TOGETHER IN ENCOURAGING THE LOCAL POPULATION TO SEEK FURTHER KNOWLEDGE, ESPECIALLY IN SUCH AREAS AS DATA PROCESSING, COMPUTER TECHNOLOGY, TEACHING, POLICE, FIRE, MARINE SCIENCE, SOCIAL WELFARE, MENTAL HEALTH, AND HOME-RELATED SERVICES. (HH)

ED017257

EDUCATION AND TRAINING SURVEY

CITY OF BEVERLY

JC 680 034

1967

NORTH SHORE COMMUNITY COLLEGE
BEVERLY, MASSACHUSETTS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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EDUCATION AND TRAINING

SURVEY

CITY OF BEVERLY

COMMONWEALTH OF MASSACHUSETTS

By

North Shore Community College
Beverly, Massachusetts
Harold E. Shively, President

In Cooperation with the
Commonwealth of Massachusetts
Higher Education Facilities Commission
and The Beverly Chamber of Commerce

UNIVERSITY OF CALIF.
LOS ANGELES

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JC 680 034

December 1, 1967

Support of this Project
was funded, in part,
through Title I of the
Higher Education Act of 1965
and the Beverly Chamber of Commerce

LIST OF TABLES

		Page
Table I	Number of People - City of Beverly and Border Towns	11
Table II	Comparative Income of Families - City of Beverly and Border Towns	12
Table III	Employment by Occupational Classes - City of Beverly and Border Towns	15
Table IV	Educational Attainment - City of Beverly and Border Towns	17
Table V	Housing Conditions - Occupancy per Unit - City of Beverly and Border Towns	19
Table VI	Housing Rental Costs - City of Beverly and Border Towns	20
Table VII	Age Composition - City of Beverly and Border Towns	21
Table VIII	The Age of the Respondents	24
Table IX	The Educational Level of the Respondents	25
Table X	Specific Training in Last Year of School by Respondents According to Amount of Formal Education	27
Table XI	Specific Training in Last Year of School by Respondents According to Age	29
Table XII	On-the-Job-Training by Respondents According to Amount of Formal Education	31
Table XIII	On-the-Job Training by Respondents According to Age	32
Table XIV	Special Training Received by Respondents According to Educational Status	35
Table XV	Special Training Received by Respondents According to Age	36

LIST OF TABLES (Continued)

		Page
Table XVI	Current Training Required for Present Job by Respondents According to Educational Status	39
Table XVII	Current Training Required for Present Job by Respondents According to Age	40
Table XVIII	Additional Refresher Training Requested by Respondents According to Educational Status	43
Table XIX	Additional Refresher Training Requested by Respondents According to Age	44

LIST OF GRAPHS

		Page
Graph I	Existing Skill Levels Within Labor Market Who are Unemployed City of Beverly, Massachusetts	47
Graph II	Respondent Percentage Reporting Existing Skills Within Labor Market According to Level, Type, and Place of Training Required for Present Job, City of Beverly	49

TABLE OF CONTENTS

	Page
Acknowledgements	viii
Preface	ix
Part I - Background Data	1
Introduction	2
Limitations	2
Procedure and Methodology	3
The Sample	4
Inferences About the Sample	5
Beverly and Its Economy	7
Description of the Area	7
Description of the Population	10
Family Income	12
Occupational Status	14
Educational Attainment	16
Standard of Living - Housing Occupancy	18
Standard of Living - Rental Costs	20
Population Age Composition	21

TABLE OF CONTENTS (Continued)

Part I -- Background Data (Continued)	Page
Changing Demands for Labor Skills -- The Need for Retraining Programs	22
Part II- Analysis of Data and Conclusions	23
Age of Respondents	24
Educational Level	25
Specific Prior Training	26
On-the-Job-Training	30
Other Special Training	34
Specific Training for Current Employment	38
Refresher Courses Requested	42
Disabilities and Physical Limitations	46
Employment Status and Types	46
Conclusions	50
Comments and Recommendations	54
Part III- Appendices	57
Appendix I - May We Have Five Minutes of Your Time? and Training and Education Survey Questionnaire	58
Appendix II- Occupational Titles	61

ACKNOWLEDGEMENTS

The Project Director acknowledges the cooperation and helpful information given freely by the residents of Beverly who willingly furnished a vast amount of information on current employment and prospective needs during the years immediately ahead.

The help of the Commonwealth of Massachusetts Department of Commerce, Division of Research, as well as the Regional Office of the United States Employment Security Office is hereby gratefully acknowledged. The Study Advisory Committee, both individually, and collectively, is offered thanks.

Space prohibits personal mention of all the individuals, both in official and unofficial roles, who contributed to the survey in a multitude of ways. Nevertheless, special mention must be made of the unusual contributions of several individuals, whose unflagging interest and cooperation shaped the survey and contributed to making the coverage and depth of the survey greater than would have been possible without their interest and efforts. These are Harold E. Shively, President, North Shore Community College, Dr. Joseph E. Marron, Chairman, Division of Social Sciences, North Shore Community College and Study Research Associate, Oscar A. Olsen, Manager, and Bertram Glovsky, President, Beverly Chamber of Commerce, Miss Maureen Osolenick, Assistant and Dr. Richard McCann, Executive Director, of the Massachusetts Higher Education Facilities Commission.

Acknowledging thanks are also extended to Miss Terry Gemmel, Research Assistant, Mrs. Hazel Mahoney and Mrs. Gertrude Devine, Secretarial Assistants, as well as to the editors and feature writers of the Beverly Times for their public information coverage.

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EDUCATION AND TRAINING SURVEY
City of Beverly, Massachusetts

PREFACE

The mid-century paradox of wastefully high unemployment levels in an affluent and economically active society has engaged the attention of many. Even in business recessions, the Nation has long observed that there are hundreds of jobs that cannot be filled for lack of qualified applicants and hundreds of unemployed throughout the nation, not excluding the Commonwealth of Massachusetts, who cannot fill any available job opening.

With the passage of the Area Redevelopment Act of 1961, the Manpower and Training Act of 1962, and the Higher Education Act of 1965, major efforts were initiated by the federal and state governments to correct this disparity between men and jobs by retraining the unemployed in the skills demanded in our society.

Fundamental to employment is training and education in some discipline regardless of the level of skill demanded. But, yet more fundamental, is "Education for what?"

Cognizant of this fundamental question, the North Shore Community College developed an Education and Training Survey through Title I of the Higher Education Act of 1965 in cooperation with the Commonwealth of Massachusetts Higher Education Facilities Commission and the Beverly Chamber of Commerce. What exists must be known before one acknowledges as to what can be done. With this thought, two specific questions were directed to the City residents.

What are the educational backgrounds, formal and informal, of the residents of the City? What specific educational and training needs are desired by residents who are now unemployed or who wish to upgrade employment avenues? Two specific questions of many that were asked, but two specific questions for which answers were searched.

This report attempts to document a profile of education and training needs which will provide a base for educational and training opportunities for the City of Beverly residents. Moreover, it should generate a concern for retraining the unemployed and stimulate a greater employment climate and be of concern to employers, labor, community development organizations and, above all, for the educators in all types of institutions of Beverly and surrounding communities.

PART I

BACKGROUND DATA

INTRODUCTION

"...Not too long ago, education was considered the prestige of only the wealthy -- the leisure class. The evolution of the American idea of free public education for all, with public schools locally managed, and largely locally financed, has been closely bound to the development of the nation itself. United States educational history reflects the American commitment to the ideal of education for everyone -- the conviction that an educated population is essential to an effective democracy, to freedom, and to economic growth."[1]

This Education and Training Survey was carried out primarily to determine the needs and/or desires of the residents of Beverly with respect to additional training, with the intent of providing opportunities for such training whenever possible if such opportunities are not yet available and to point out where such training can be obtained if already available. However, there were two secondary purposes, either or both of which may be more important than the primary one. They are:

a. To determine to what extent the desires of the residents are in line with existing business, industrial, and service needs.

b. To determine to what extent the desires of the residents are in line with anticipated business, industrial and service needs.

LIMITATIONS:

This study is limited to the City of Beverly. While it is known that the city's economy, as well as its cultural and social ties, are aligned as a unit to the border towns and the metropolitan Boston complex, its political bonds are centrally linked to a municipal unit.

Discussion herein concerns only the City of Beverly and the data which surrounds border towns should be viewed only as supporting material; however, significant educational and training opportunities do become important as they increase or decrease, not only to its own economy, but to the economy of the region as well by enhancing a broader based industrial and development climate.

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[1]Cohen, Willard J., "Education and Learning," The Annals, Volume 373, September 1967.

PROCEDURE AND METHODOLOGY:

The information was gathered through a questionnaire directed to the residents of Beverly.[2] In order to obtain data relevant to the purpose of the survey, it was necessary to inquire primarily about the kinds of additional training desired; the responses serving as an indicator of the direction of the interests of the residents. The importance of their interests would be determined by comparing them with both current and future needs of the city.

In addition to obtaining information about the kinds of training desired, it was necessary to obtain information about the kinds of training already received. This information is important not only to determine the relevancy of prior training at various stages of growth but also to determine to what extent desired training is consistent with past training. It was assumed that past training was directly related to the kind of employment citizens had. It is recognized that a more direct way of determining what kind of employment people had would be to ask them what their jobs were at the time of completing the questionnaire and infer from that, omitting the kind of training received. This direct question was omitted for two reasons:

a. Those who are not employed or are not particularly proud of their employment would not return the questionnaire;

b. The kind of job held is of no value in determining the personal needs of the people;

c. Job titles often do not reflect the duties of the employee, and therefore, would require the gathering of job descriptions from employers;

d. The kinds of work being performed can be obtained from Bureau of Research, Massachusetts Department of Commerce and the Bureau of Census, (Enumeration District Data) U.S. Department of Commerce; and

e. Current work patterns do not relate the amount and variety of training not being utilized.

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[2]Appendix I, page 58.

Ten thcusand pre-paid envelopes, each containing three copies of the questionnaire plus the covering letter, were sent to all resident addresses in Beverly. The number of questionnaires sent to each resident was to maximize saturation of the population 18 years of age and over. Further, the cover letter indicated that if additional copies were desired, a phone call would suffice to obtain them. Simultaneously, extensive publicity was afforded the project by the Beverly Times, which in addition to the story included a print of the questionnaire being sent to the residents.

After the questionnaires had been returned, all responses to the questions on training were classified according to the Department of Labor's Dictionary of Job Descriptions. These were subsequently reduced to thirteen more general classifications. The General Classifications and the jobs subsumed under each are presented in Appendix II.

The responses to the questions related to training were then tallied according to age, sex, and level of formal education.

THE SAMPLE:

Since the questionnaire was directed primarily at those who would like to obtain additional education or training, it can be assumed that those who most desired such training, for whatever reasons, actually returned the questionnaire while those who were content with their situations would be less likely to return it. At any rate, 1000 indicated a desire for additional training. It can be reasonably assumed that this number represents no less than forty percent of those who actually would like to have such training and no more than eighty percent. Therefore it can be inferred that 1250 to 2500 (5 to 10 percent) of the residents of Beverly who are 18 years of age or older are actually interested in obtaining additional formal training at the present time.

Highlights of the Tabulations:

a. Almost an equal number of men and women returned the questionnaire (911 and 893 respectively).

b. Eighty percent of those returning the questionnaire were married; almost equally divided between men and women (784 and 713 respectively).

c. Sixty percent of the sample men were under 25 years of age while only 40 percent of single women were under 25 years of age.

d. One-third of the married men were under 35 years of age while 40 percent of married women were under 35.

e. The average age of the sample is between 36 and 45.

f. Eleven percent of the sample was 56 years of age or over.

g. The educational level of the sample was in excess of the typical educational level of the residents of Beverly. According to the Bureau of the Census, approximately 60 percent have a high school diploma. Over 95% of the sample have at least a high school diploma.

h. The educational level of married males in the sample is significantly higher than that of married women whereas the educational levels of single men and women are about the same.

INFERENCES ABOUT THE SAMPLE:

1. The percentage of women within the fertility age bracket of 14 - 44 who responded to the questionnaire and who are in the labor market indicates a need for child care centers for this group of residents. Moreover, training in child care center operations would benefit a dual labor market: Those mothers who have children under six years of age and who want to return to work; and skilled training in the child care center operations would benefit an interested skills group of operatives, per se.

2. A significant number of persons 56 years of age or older responded to the questionnaire. It is generally accepted that they are primarily interested in obtaining information which will enable them to take maximum advantage of their income, as well as their leisure hours. Information about education in such areas as medicare, social security, insurance benefits, health care, home ownership, mortgages, and types of community projects that would be beneficial to them appears limited. This type of service might be accomplished effectively through education for leisure or a drop-in center.

3. Space at the bottom of the questionnaire was provided for those who were interested in receiving announcements of special programs to be offered by the North Shore Community College. Planned as a second phase of the project, if the returns indicated that it was warranted, was a follow-up of (a) those who wished to take advantage of a guidance-placement service provided they gave their names and addresses; and (b) of forwarding of the North Shore Community College Division of Continuing Studies (Summer and Evening Division) catalogue to all those who wished to receive announcements of special programs.

4. A sufficient number of respondents who gave their names and addresses indicated a desire for additional guidance to justify such a program and plans are under way to obtain funds to support the program. Approximately 1000 of the respondents indicated a desire to receive notices of special programs. North Shore Community College, Division of Continuing Studies catalogues were mailed to all 1000 around September 1, 1967.

BEVERLY AND ITS ECONOMY

Description of the Area:

The City of Beverly is an integral part of the Boston Standard Metropolitan Statistical Area (SMSA), as adopted by the Bureau of Census, U.S. Department of Commerce. Located on the Atlantic seaboard, 18 miles north of Boston, it is socially and economically integrated with its border towns of Danvers, Wenham, Salem, and Manchester.

Originally settled in 1626, Beverly was incorporated as a town in 1668 and as a city in 1894. After an unsuccessful attempt to settle at Cape Ann, Roger Conant and his group settled at Naumkeag, later called Salem. The town of Salem granted 1,000 acres to Conant and four other planters along the Bass River which is today part of Beverly. John Balch, one of the planters, built his house on this land in 1636 and today this house still stands as the oldest house in Massachusetts. Fishing and trading soon became the principal occupations of the inhabitants of this town. After the Revolutionary War, Beverly became one of the largest ports for foreign and domestic trade. Rich cargoes from Africa and the Spice Islands scented the air of the waterfront. A salt works was established as early as 1638. The first cotton mill in America began operation in Beverly in 1788. Beverly is the birthplace of the American Navy since the first ship of the American Navy was commissioned here in 1775.

Beverly is a mixed residential and manufacturing city. In 1965, 605 firms reported to the Massachusetts Division of Employment Security. These firms employed 7,584 persons in November and had an annual payroll of $41,794,000. Beverly Harbor handled 161,905 tons in 1965 of which 194 were foreign imports consisting mostly of inedible animal products.

Manufacturing of electronic devices and heavy equipment was by far the largest source of employment with 54.6% of the total workforce (November, 1966). Manufacturing activity is heavily concentrated in machinery-making firms. Principal among firms in this field and by far the largest single employer in the city is the United Shoe Machinery Corporation. To a considerable extent, the economic health of the city is dependent on the prosperity of this firm. Next in importance among manufacturing firms is the Bomac, a Division of Varian Laboratories, Inc., electronics manufacturers; the Goldway Shoe Corporation, and Reid Brothers Company, Inc.

Wholesale and retail trade is the second most important industry group as measured by employment and payrolls.

Transportation facilities by rail, ocean, and air are available in Beverly. The public roads and highways are generally in good condition meeting the requirements of modern transportation and making connections with all major highways in the area.

Beverly is located on the Boston-Portsmouth, New Hampshire line of the Boston and Maine Railroad. There are two stations on this line, Beverly, 18.3 miles from the North Station in Boston, and North Beverly station, 20.8 miles from Boston. The average commuting time to or from Boston and the Beverly stations is about 35 minutes. On the Gloucester branch, which goes from Beverly to Rockport, the Boston and Maine has the following stations: Beverly, Montserrat, Prides Crossing, and Beverly Farms.

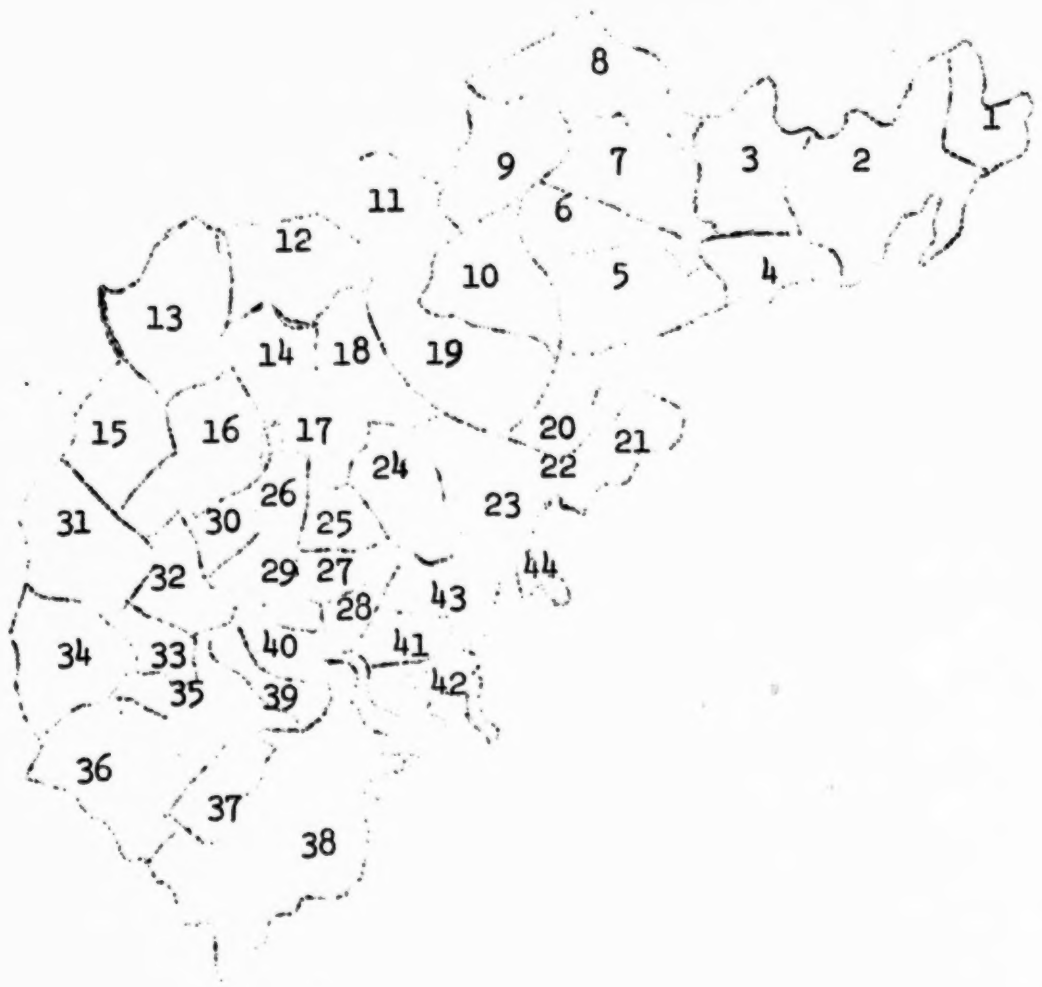
The principal highways in Beverly are Routes 128, 127, and 1A. Route 128, the circumferential highway around Boston, enters Beverly from the west and proceeds northeast into Gloucester. Route 127 originates in the southern section of Beverly and is the shore route which going northeast encircles the Cape Ann area. Route 1A runs parallel to U.S. Route 1 and joins it in Newburyport, at which point U.S. Route 1 continues north into the State of New Hampshire.

The Eastern Massachusetts Street Railway Company and the Michaud Bus Lines, Incorporated, provide bus service to the city. Established truck lines provide competitive service locally and to long distance points. The Beverly Municipal Airport is located 3 miles north-west of Beverly Center and has 3 runways of 3,500, 4,650 and 5,000 feet in length and a width of 150 feet for each. Harbor facilities are available at Beverly Harbor, which has a controlling depth of 24 feet at mean low water.

The City of Beverly established a planning board in 1925 under Section 70, Chapter 41 of the General Laws of Massachusetts, and re-established under 81-A, Chapter 41, General Laws, in 1945. The City employed a planning consultant to prepare a Master Plan to guide the City's growth, which was completed in 1960.

BEVERLY AND ITS ENVIRONS

1 Rockport
2 Gloucester
3 Essex
4 Manchester
5 Beverly
6 Wenham
7 Hamilton
8 Ipswich
9 Topsfield
10 Danvers
11 Middleton
12 North Reading
13 Wilmington
14 Reading
15 Burlington
16 Woburn
17 Wakefield
18 Lynnfield
19 Peabody
20 Salem
21 Marblehead
22 Swampscott
23 Lynn
24 Saugus
25 Melrose
26 Stoneham



9

Malden 27
Everett 28
Medford 29
Winchester 30
Lexington 31
Arlington 32
Belmont 33
Waltham 34
Watertown 35
Newton 36
Brookline 37
Boston 38
Cambridge 39
Somerville 40
Chelsea 41
Winthrop 42
Revere 43
Nahant 44

Description of the Population:

The current aggregate population of Beverly is 38,137 persons. In the decade 1950 to 1960, the population increased by 7,224 or 25.0%. There was an excess of births over deaths of 4,381. During this same period, there was a net in-migration of 2,843 persons.

Of the 11,806 persons of foreign stock, 31.4% were Canadian, 19.95% Italian; 14.2% United Kingdom; 12.3% Irish; and 4.4% Russian. As of 1960, of the 25,105 persons 14 years old and over in Beverly, 14,068 or 56.0% were in the civilian labor force. Of these 65.8% were males and 34.2% were females. Some 3.4% were unemployed compared with 3.8% for the Boston Metropolitan area.

TABLE I

NUMBER OF PEOPLE
CITY OF BEVERLY AND BORDER TOWNS[1]

Year	Beverly		Danvers		Manchester		Peabody		Salem		Wenham		Ratio to 1930 Boston Metropolitan Area
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	%
1910	18,650	74.3	9,407	72.6	2,673	101.4	15,721	73.7	43,697	100.7	1,010	90.3	74.6
1920	22,561	89.9	11,108	85.7	2,466	93.4	19,552	91.6	42,529	98.1	1,090	97.4	86.2
1930	25,086	100.0	12,957	100.0	2,636	100.0	21,345	100.0	43,353	100.0	1,119	100.0	100.0
1940	25,537	101.8	14,179	109.4	2,472	93.8	21,711	101.7	41,213	95.0	1,220	109.2	101.0
1945	26,810	106.9	14,614	112.8	2,539	96.3	22,303	104.5	42,833	98.8	1,406	125.6	106.6
1950	28,884	115.1	15,720	121.3	2,868	108.8	22,645	106.1	41,880	96.6	1,644	146.9	111.2
1955	31,432	125.3	18,185	140.3	3,376	128.1	26,682	106.3	40,117	92.5	2,245	202.3	111.4
1960	36,108	143.9	21,926	169.2	2,932	149.2	32,202	150.7	39,211	90.4	2,798	250.0	119.4
1965	38,137	--	24,764	--	4,386	--	41,781	--	40,112	--	3,114	--	--

[1] U. S. Department of Commerce, Bureau of the Census, Washington, D.C., 1965.

Family Income

According to the U.S. Department of Commerce, Bureau of Census,[1] the City of Beverly enjoyed a higher rate of earned income than did the Boston Metropolitan area. The median family income for the City was $6,708, as compared to $6,687 for the Boston Metropolitan Area. Beverly, as compared to border towns, ranks little more than midpoint in the array of earned family income, as noted in Table II.

TABLE II

Comparative Income of Families
City of Beverly and Border Towns[1]

	Beverly	Danvers	Peabody	Salem	Manchester	Wenham	Boston MA
Incomes under $3,000	11.4	8.9	9.6	13.5	11.9	8.6	11.0
$3,000 - $5,999	29.5	26.6	30.1	36.9	30.5	23.4	30.7
$6,000 - $9,999	40.9	46.3	45.0	36.5	31.7	34.0	37.0
$10,000 +	18.9	18.2	15.3	13.1	25.9	34.0	21.3
Median Income (Rank Order)	6,708 4	7,018 2	6,749 3	5,970 7	6,664 6	7,671 1	6,687 5

[1]Town and County Data Book, U.S. Bureau of Census, U.S. Department of Commerce, 1965.

Low Levels of Income

Significant to the social, cultural and economic status of Beverly is the percentage of families with annual incomes of less than $3,000. Within the population base, 9.6% of the resident families are reported to be within this income bracket. It is interesting to note that, according to the United States Department of Commerce, 12.8% of the population within Essex County are within the less than $3,000 income level.

Occupaticnal Status

Of the 25,105 persons who are 14 years of age and over, a total of 14,068 or 56.0% were in the civilian labor force. Of these, 65.8% were males and 34.2% were females. It is noted that 3.4% or 478 persons were unemployed, compared with 3.8% for the Boston Metropolitan Area.

Table III indicates the comparative degree of employment according to occupation[1] of Beverly, the border towns, and Metropolitan Boston area.

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[1]For occupational classifications see the Dictionary of Occupational Terms, Appendix II, page 61.

Table III

Employment by Occupational Classes
City of Beverly and Border Towns

	Beverly		Danvers		Manchester		Peabody		Salem		Wenham		Total In Boston Metropolitan Area
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	%
Professional, Technical & Kindred	2,233	16.4	1,135	14.8	305	19.5	1,492	11.7	1,670	10.2	261	25.5	14.6
Managers, Officers & Proprietors	1,070	7.9	645	8.4	195	12.5	1,013	7.9	998	6.1	149	16.5	8.4
Clerical	2,094	15.4	1,052	13.8	222	14.2	1,599	12.5	2,592	15.8	108	12.5	18.7
Sales	1,157	8.5	621	8.1	113	7.2	1,065	8.3	1,211	7.4	87	8.5	8.0
Craftsmen, Foremen, etc.	2,242	16.5	1,357	17.7	179	11.4	1,911	15.0	2,114	12.9	121	11.8	13.1
Operatives	2,317	17.1	1,398	18.3	90	5.8	3,391	26.6	4,197	25.6	77	7.5	16.6
Private Household Workers	319	2.3	76	1.0	156	10.0	79	0.6	214	1.3	51	5.0	1.5
Service Workers	1,168	8.6	722	9.4	102	6.5	1,042	8.2	1,519	9.3	49	4.8	8.9
Laborers	465	3.4	264	3.5	135	8.6	581	4.6	803	4.9	38	3.7	3.6
Not Reported	520	3.8	385	5.0	67	4.3	592	4.6	1,091	6.6	43	4.2	6.6

Educational Attainment

Beverly ranks above mid-point in the classification array of educational attainment by number of years among border towns and slightly higher than Metropolitan Boston. Of the number of persons residing in Beverly who are 25 years of age and over, 58.9 percent have completed high school or more. The median number of school years completed is 12.2

Table IV indicates the comparison between Beverly and the border towns in the levels of education.

Table IV

Educational Attainment
City of Beverly and Border Towns

	Beverly	Danvers	Man-chester	Peabody	Salem	Wenham	Boston Metropolitan Area
Median Number of School Years Completed	12.2	12.1	12.5	11.6	10.5	12.7	12.1
Completed Less Than 5 Grades	3.0%	4.6%	3.1%	8.2%	7.0%	0.5%	5.2%
Completed High School or More	58.9%	53.1%	64.8%	47.4%	39.5%	73.6%	53.4%

Standard of Living - Housing Occupancy

Of the 11,024 housing units in Beverly, 10,444 were occupied and 284 or 2.6 vacant and available for occupancy. Within the occupied units, 78.3 percent were owner-occupied and 21.7 percent were rented. Comparatively, of Boston Metropolitan area's 814,000 housing centers, 52.4 percent were owner-occupied, 45.2 percent tenant-occupied and 2.4 percent were vacant and available for occupancy.

Table V indicates the comparison of Beverly to border towns in housing occupancy.

Table V

Housing Conditions - Occupancy per Unit
City of Beverly and Border Towns

Persons Per Unit	Beverly Units	%	Danvers Units	%	Manchester Units	%	Peabody Units	%	Salem Units	%	Wenham Units	%	Metropolitan Boston Area %
1 person	1,239	11.9	548	9.8	147	12.4	1,017	10.7	2,174	17.4	64	8.6	14.9
2 persons	2,607	25.0	1,450	25.8	322	27.1	2,370	24.9	3,724	29.9	180	24.3	26.4
3 persons	2,000	19.1	1,181	21.0	224	18.8	1,976	20.7	2,270	18.2	156	21.1	19.1
4 persons	2,081	19.9	1,103	19.6	228	19.2	2,033	21.3	1,917	15.4	167	22.5	17.3
5 persons	1,392	13.3	711	12.6	144	12.1	1,280	13.4	1,259	10.1	92	12.4	11.6
6 persons or more	1,125	10.8	628	11.2	124	10.4	859	9.0	1,120	9.0	82	11.1	10.7
Median persons per unit	-	3.2	-	3.2	-	3.1	-	3.2	-	2.6	-	3.3	3.0

Standard of Living - Rental Costs

Within the area of housing units rentals for the city of Beverly, the median rent cost per month, excluding utilities and heat, was $79.00 per month, with a median number of 3.2 persons occupying each unit in this category.

Table VI indicates the comparative rental cost figures between Beverly and border towns.

Table VI

Housing Rental Costs
City of Beverly and Border Towns

Rent per Month (Excluding utilities/ electricity)	Beverly %	Danvers %	Manchester %	Peabody %	Salem %	Wenham %	Boston Metropolitan Area %
Under $40	5.1	3.1	1.4	12.5	5.5	-	4.9
$40 - $59	15.5	17.8	8.5	20.0	18.8	15.1	14.9
$60 - $99	63.9	55.7	57.3	57.3	64.3	56.6	55.0
$100 +	15.5	23.4	32.7	10.2	11.4	28.3	25.2
Median Rent	$79	$79	$92	$71	$75	-	$82

Population
Age
Composition

The median age for the city of Beverly is 29.8, as compared to the median age of 32.0 of the Metropolitan Boston Area and 29.5 of the United States. Some 19,913 persons or 61.8 percent of the totsl population are 21 years of age or over; however, the largest segment of the population, 22,319 persons, are over 14 years of age.

Table VII

Age Composition
City of Beverly and Border Towns

	Beverly		Danvers		Manchester		Peabody		Salem		Wenham		Boston Metropolitan Area
	#	%	#	%	#	%	#	%	#	%	#	%	%
Under 5	4,366	21.1	2,480	11.3	465	11.8	4,101	12.7	3,850	9.8	278	9.9	10.5
5 - 13	6,637	18.4	3,634	16.6	770	19.6	5,782	18.0	6,105	15.6	589	21.0	16.2
14 - 19	3,296	9.1	1,439	6.6	298	7.6	2,169	6.7	2,973	7.6	361	12.9	8.5
14 +	25,105	69.5	15,812	72.1	2,697	68.6	22,319	69.3	29,257	74.6	1,931	60.0	73.3
21+	21,416	59.3	14,178	64.7	2,433	61.9	19,913	61.8	25,693	65.5	1,617	57.8	63.5
65 +	3,533	9.8	1,488	6.8	499	11.4	3,026	9.4	5,298	13.5	1,259	9.3	10.9
Median Age	-	29.8	-	32.0	-	32.3	-	31.1	-	35.3	-	32.1	32.0

Changing Demands for Labor Skills -- The Need for Retraining Programs

A dynamic industrial economy is characterized by slow but continuous changes in processes and products, with consequent changes in the skills required of labor force members. Further, in a growing economy over any considerable time period, the labor force is augmented by the coming of working age of a sizeable stream of new entrants, while it is reduced by a smaller stream of retirement due to old age, illness, death and for other personal and family reasons.

A feature of modern economies is the high degree of specialization of occupational titles and skills and the extremely large and growing diversification of distinct occupations or jobs to be found therein. The Dictionary of Occupational Titles, Volumes I and II, prepared by the United States Employment Service, Division of Occupational Analysis and published in 1957, contains no fewer than 40,023 separately defined job titles for some 22,028 different job definitions in American economy, and these are being increased by hundreds and possibly thousands of new titles and definitions per year.

Another characteristic of dynamic economies which reflects both the changing nature of technologies and changing demands for industrial and consumer goods is the existence at any given time of considerable unemployment simultaneously with considerable numbers of unfilled jobs. Until unemployment compensation systems were established in the United States during the 1930's, there were no reliable figures on volume of unemployment and accurate information on the number of vacant jobs is inadequate.

In recognition of these characteristics of dynamic economies, changing processes and products, there are changing skill requirements in labor market demand which compound the need to evaluate existing opportunities. There are also the high degree of occupational skill specializations and the existence of unfilled jobs due, in part, to lack of job candidates with skill requirements needed on the vacant jobs even amidst situations which represent relatively high levels of unemployment. There is need to evaluate existing educational opportunities and needs, as well as environmental situations which support unemployment conditions.

PART II

ANALYSIS OF DATA AND CONCLUSIONS

ANALYSIS OF DATA

A summation of the findings within the study indicates the following factors are inherent in the population base of Beverly. It should be noted that these points are statistical inferences cited from within the sample, yet they do conform to supporting data, as established by the U.S. Department of Commerce, Bureau of the Census for the city.

I. Age of Respondents:

While questionnaires were distributed to all households within the City, the largest number of respondents replying were married males in the 36-45 age group; however, for married females, the largest responding number was between the ages of 26-35. Respondents were in a higher age bracket than the median age of 29.8. As noted, a total of 21,416 persons are over 21 years of age out of the population total of 38,137 persons (Table VII).

Table VIII

The Age of the Respondents

Age	Married (1497) Males	Married (1497) Females	Single (307) Males	Single (307) Females	Totals
18-25 years	33	58	76	73	240
26-35 years	229	239	22	18	508
36-45 years	262	201	10	22	495
46-55 years	171	145	7	35	358
56 + years	84	63	9	31	187
Unknown	5	7	3	1	16
Totals	784	713	127	180	1804

II. Educational Level:

The largest number of respondents within the sample had completed 12 years of education, which is slightly less than the median number of 12.2 for the city of Beverly as a whole. Reporting second and third in the array, however, were persons who had completed 16 and 17 years of education.

Reviewing data then indicates that an overwhelming majority of the respondents were College trained persons, which indicates a long-term concern for education and training and, hence, responding to a Questionnaire study technique. (Table IX).

Table IX

The Educational Level of the Respondents

Formal Education	Married		Single		Totals
	Males	Females	Males	Females	
Less than 8 years	4	3	2	1	10
8 but less than 12	40	24	7	5	776
12 years	151	231	22	40	444
13 years	49	77	23	22	171
14 years	85	97	25	30	237
15 years	51	86	18	19	174
16 years	177	145	7	25	354
17 years or more	224	47	23	36	330
Blanks	3	3	0	2	8
Totals	784	713	127	180	1804

III. Specific Prior Training:

Men with less than four years of college have concentrated generally in the fields of applied industrial arts and technical skills,[1] although a remarkable number had training in the physical science area. Women respondents with less than four years of college, trained primarily for secretarial-type employment, though a significant number received training in nursing and for the teaching profession.

Formal educational concentration among male college graduates was in the area of physical sciences and business. Among female college graduates, respondents' concentration appeared in the field of education.

Relatively few of the respondents indicated training in the home related services and such relatively new technical business and social programs as computer science, data processing, food technology, social planning, community organization, environmental health, sanitation, and the like. By virtue of the age of the majority of respondents, education programs, either of a formal or informal nature, which today are concerned with several of newly defined employment areas, were non-existent or narrowly programmed among a limited number of public and private institutions. (Tables X and XI)

Age-wise, a significant trend is noted in the relatively few young men who have trained in the area of Applied Industrial Arts and Technical skills, Business and the Physical Sciences, as compared with other age groups. On the other hand, female respondents between the ages of 18-25 have retained a proportionate interest in Business, although a slight decline is noted in the number of those interested in secretarial work. This may be understandable when considering the educational attainment of resident respondents.

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[1] Classification of these skills is differentiated in Appendix II, page 61.

Table X

Specific Training in Last Year of School by Respondents
According to Amount of Formal Education

	Formal Education								
	Less than 12 years		12 to 15 years		16 + years		All Columns		Total
	Males (N= 53)	Females (N=33)	Males (N=424)	Females (N=602)	Males (N=431)	Females (N=253)	Males	Females	(N=1796)
1. Business	5	5	117	130	92	8	214	143	357
2. Physical Science	3	0	66	8	148	10	217	18	235
3. Applied Industrial Arts & Technical Skills	18	0	64	9	9	0	91	9	100
4. Health Services (Incl. Nursing)	0	1	4	91	15	26	19	118	137
5. Social Sciences	0	0	2	5	24	14	26	19	45
6. Arts & Humanities (Incl. Foreign Languages)	0	0	3	12	6	24	9	36	45
7. Secretarial	0	5	0	186	0	7	0	198	198
8. Education	0	0	4	29	51	117	55	146	201
9. Degree or Diploma	9	4	69	72	30	22	108	98	206
10. Home Related Services	0	2	1	15	5	9	6	26	32
11. EDP	0	0	0	4	0	0	0	4	4
12. Communications	0	0	2	3	9	2	11	5	16
13. Miscellaneous	1	0	10	5	17	7	28	12	40
Did not respond	17	16	82	33	25	7	124	56	180
							908	888	1796

According to comparative age factors in relation to prior training, it is noted that the largest number of respondents were males between the ages of 36 to 45 and had pursued training in business, while the largest number of females between the ages of 26 and 35 had completed training in education. The aggregate sample shows that business, physical sciences, diploma studies, and secretarial training were pursued in the last years of formal schooling, and the respondents, for the most part, are still actively employed in these fields, as noted in Table XI.

Table XI

Specific Training in Last Year of School by Respondents According to Age

	18-25		26-35		36-45		46-55		56 & over		All Ages		
	M (N=109)	F (N=141)	M (N=251)	F (N=257)	M (N=272)	F (N=223)	M (N=180)	F (N=180)	M (N=93)	F (N=94)	M (905)	F (895)	Total (1860)
1. Business	14	21	59	37	72	40	50	26	19	17	214	141	355
2. Physical Sciences	16	6	56	3	77	7	41	2	27	1	217	19	236
3. Applied Industrial Arts and Technical Skills	4	2	30	3	26	4	21	0	10	0	91	9	100
4. Health Services (Including Nursing)	2	13	7	36	5	9	4	22	1	9	19	119	138
5. Social Sciences	2	1	10	7	6	5	7	4	1	2	26	19	45
6. Arts & Humanities (Including Foreign Languages)	1	4	1	8	1	13	5	4	1	7	9	36	45
7. Secretarial	0	19	0	59	0	53	0	44	0	22	0	197	197
8. Education	2	19	15	43	23	31	13	24	2	21	55	138	193
9. Degree or Diploma	27	22	19	22	39	23	14	21	9	7	108	95	203
10. Home Related Services	0	2	2	9	1	6	2	5	1	2	6	24	30
11. EDP	0	1	0	2	0	0	0	0	0	1	0	4	4
12. Communications	0	2	3	1	3	1	2	1	3	0	11	5	16
13. Miscellaneous	6	0	9	6	111	1	1	4	1	1	28	12	40
Did not respond	35	29	40	21	8	0	20	23	18	4	121	77	198
											905	895	1800

IV. On-the-Job Training:

On-the-job training, as noted by respondents, has been in the area of Industrial Arts and Technical skills. By virtue of the age of respondents, as well as type of skills demanded in these employment areas, it would appear that training was prompted by dual factors: (1) the necessity of upgrading specific skills with the advance of industrial production and technical developments, and (2) the specific skill requirements which could be developed as a requirement for organized labor through plant inter-type programs.

Data does not reveal that participation was in any way avocation oriented; however, leisure centered goals may have assisted in participation factors.

Data indicates that in these areas where on-the-job participation has occurred, courses in instruction - formal and informal - have, for the most part, been standard yearly offerings by public secondary schools in the Adult Evening program. In the latter instance, participation is primarily motivated by personal interest.

On-the-job training is most commonly programmed generally in the areas of Business, Industrial Arts, Education and Physical Sciences. Specific intern type training occurred in areas of Banking, Clerical, Sales and Retailing for Business. For the Applied Industrial Arts and Technical skill area, plumbing, technology, refrigeration, and electrical work appeared most frequently where this type of training was sponsored.

Drafting, construction and electronics appeared most frequently as the physical science area where on-the-job training occurred. (Tables XII and XIII)

Table XII

On-the-Job Training by Respondents According to Amount of Formal Education

	Formal Education								
	Less than 12 years		12 to 15 years		16 + years		All Citizens		
	Males (N=53)	Females (N=33)	Males (N=424)	Females (N=602)	Males (N=431)	Females (N=253)	Males	Females	Totals
1. Business	4	2	53	86	50	4	107	92	199
2. Physical Sciences	7	2	33	11	45	6	85	19	104
3. Applied Industrial Arts and Technical Skills	23	1	68	13	31	6	122	20	142
4. Health Services (Including Nursing)	0	0	0	57	3	15	3	72	75
5. Social Sciences	0	0	4	2	10	12	14	14	28
6. Arts & Humanities (Including Foreign Languages)	0	0	1	0	1	1	2	1	3
7. Secretarial	0	0	0	65	0	7	00	72	72
8. Education	0	1	2	10	28	79	30	90	120
9. Degree or Diploma	0	0	10	3	7	0	17	3	20
10. Home Related Services	4	4	9	39	16	14	29	57	86
11. EDP	0	1	10	29	11	4	21	34	55
12. Communications	0	0	1	1	6	2	7	3	10
13. Miscellaneous	2	0	14	8	10	5	26	13	39
Did not respond	13	22	209	278	213	98	435	398	833
							898	888	1786

Table XIII

On-the-Job Training By Respondents According to Age

	AGE												
	18-25		26-35		36-45		46-55		56 & over		All Ages		
	M (N=109)	F (N=141)	M (N=251)	F (N=257)	M (N=272)	F (N=223)	M (N=180)	F (N=180)	M (N=93)	F (N=94)	M (905)	F (895)	Total (1800)
1. Business	10	14	30	19	38	21	21	23	8	15	107	92	199
2. Physical Sciences	8	5	26	4	24	7	15	1	12	2	85	19	104
3. Applied Industrial Arts & Technical Skills	10	7	33	2	42	7	23	3	14	1	122	20	142
4. Health Services (Including Nursing)	0	9	2	24	0	21	0	14	1	4	33	72	75
5. Social Sciences	2	0	3	6	3	4	5	0	1	4	14	14	28
6. Arts & Humanities (Includes Foreign Languages)	1	0	0	0	1	0	0	0	0	1	2	1	3
7. Secretarial	0	9	0	26	0	18	0	14	0	5	0	72	72
8. Education	5	9	10	32	9	22	4	13	2	14	30	90	120
9. Degree or Diploma	4	2	3	1	4	0	2	0	4	0	17	3	20
10. Home Related Services	2	7	8	13	14	22	5	13	0	2	29	57	86
11. EDP	0	0	14	18	4	11	2	3	1	2	21	34	55
12. Communications	0	0	2	1	2	1	2	0	1	1	7	3	10
13. Miscellaneous	4	1	6	4	6	4	6	2	4	2	26	13	39
Did not respond	63	78	114	107	125	85	95	94	45	41	442	405	847
											905	895	1800

As noted in XIII, the largest number of on-the-job trainees were men in the field of technical skills, and between the ages of 38 to 45, while in the instance of females, the field of education received the highest number of on-the-job trainees between the ages of 26 to 35. Within the statistical total, the five fields where on-the-job training was completed were (1) Business, (2) Industrial Arts and Technical skills, (3) Education, (4) Physical Sciences, and (5) Home Related Services. It would appear that the age factor is relatively insignificant; however, the area in which on-the-job training has occurred is indication of the need to upgrade skills internally for industrial production purposes.

V. Other Special Training:

A variety of special training o
utside the home and on off-the-job has occurred among both the
male and female respondent groups,
however, such special training has been favored in the area
of health services, including nursi
ng.

In reviewing community data whe
re such specific training might apply, it appears American Red
Cross sponsored courses in first ai
d and safety and hospital oriented areas such as x-ray
technicians, laboratory assistants
and licensed practical nursing, comprise the major part of these
training areas. Fragmented, and so
mewhat unorganized, special training in data processing appears on
a relatively high scale for men.

Table XIV

Special Training Received by Respondents According to Educational Status*

	Educational Status								
	Less than 12 years		12 to 15 years		16 or more years		Combined		
	M (N=53)	F (N=33)	M (N=424)	F (N=602)	M (N=431)	F (N=253)	M (908)	F (888)	Total (1796)
1. Business	2	1	51	24	78	6	131	31	162
2. Physical Sciences	6	1	81	6	83	3	170	10	180
3. Applied Industrial Arts & Technical Skills	7	1	66	9	35	4	108	14	122
4. Health Services (Including Nursing)	5	7	27	94	28	42	60	143	203
5. Social Sciences	0	0	13	17	16	18	29	35	64
6. Arts & Humanities (Including Foreign Languages)	0	3	8	37	8	19	16	59	75
7. Secretarial	1	9	1	19	1	14	3	42	45
8. Education	0	0	1	4	18	10	9	14	23
9. Degree or Diploma	0	0	2	4	35	4	17	8	25
10. Home Related Services	4	6	39	69	17	25	80	100	180
11. ELP	0	2	14	12	15	2	29	16	45
12. Communications	2	0	9	10	17	3	28	13	41
13. Miscellaneous	1	0	11	8	6	12	28	20	48

*Multiple responses were made to this question; hence, the number who did not respond has not been determined.

Table XV

Special Training Received by Respondents According to Age

	AGE												
	18-25		26-35		36-45		46-55		56 & over		All Ages		
	M (N=109)	F (N=141)	M (N=251)	F (N=257)	M (N=272)	F (N=223)	M (N=180)	F (N=180)	M (N=93)	F (N=94)	M (905)	F (895)	Total (1800)
1. Business	6	5	24	10	46	7	38	7	17	2	131	31	162
2. Physical Sciences	11	0	43	1	79	4	24	4	13	1	170	10	180
3. Applied Industrial Arts & Technical Skills	7	4	29	2	44	0	22	4	6	4	108	14	122
4. Health Services (Including Nursing)	7	16	22	35	9	29	15	44	7	19	60	143	203
5. Social Sciences	3	1	8	2	12	15	5	13	1	4	29	35	64
6. Arts & Humanities (Including Foreign Languages).	1	3	2	10	5	20	4	13	4	13	16	59	75
7. Secretarial	1	3	0	19	0	13	1	3	1	4	3	42	45
8. Education	0	0	4	7	2	5	2	2	1	0	9	14	23
9. Degree or Diploma	0	2	6	2	10	3	0	1	1	0	17	8	25
10. Home Related Services	4	4	17	35	32	37	17	21	10	3	80	100	180
11. EDP	1	3	12	9	10	1	6	2	0	1	29	16	45
12. Communications	0	1	8	3	8	4	8	3	4	2	28	13	41
13. Miscellaneous	3	1	8	3	5	4	7	7	5	5	28	20	48

As noted in Table XV, special training of a short term duration off-the-job and beyond normal school years has occurred within the sample by the majority of all persons in health services; however, when divisioning the training areas, men had special training in the field of business and women in health services. The age at which time special training was completed was from 36 to 45 for men and 46 to 55 for females.

The age factor appears significant here for females inasmuch as data infers that children are older, and household duties are not as demanding, permitting women within this age group a greater opportunity for training and special education. For men, it would appear that the demand has been promoted by technological advancement and job security.

VI. Specific Training for Current Employment:

Logically, by virtue of the number of college trained persons responding, it would appear that sixteen or more years of formal training was needed for their current employment. Data supports this inference; however, a significant number of women are employed in home related sciences.

Table XVI

Current Training Required for Present Job by Respondents
According to Educational Status

	Educational Status								
	Less than 12 years		12 to 15 years		16 years or more		Combined		
	M (M=53)	F (=33)	M (M=424)	F (M=602)	M (M=431)	F (M=253)	M (908)	F (688)	Total (1796)
1. Business	8	2	54	49	61	1	123	52	175
2. Physical Sciences	5	1	34	2	75	0	114	3	117
3. Applied Industrial Arts & Technical Skills	21	0	60	3	13	0	94	3	97
4. Health Services (Including Nursing)	1	2	3	59	11	10	15	71	86
5. Social Sciences	0	0	3	3	13	4	16	7	23
6. Arts & Humanities (Including Foreign Languages)	0	0	3	3	6	3	9	6	15
7. Secretarial	0	1	1	36	0	6	1	43	44
8. Education	0	0	1	2	8	15	9	17	26
9. Degree or Diploma	1	2	31	27	142	75	174	104	278
10. Home Related Services	1	9	9	130	4	43	14	182	196
11. EDP	0	1	8	15	4	0	12	16	28
12. Communications	0	0	1	1	2	0	3	1	4
13. Miscellaneous	4	0	6	5	14	9	24	14	38
Blanks	12	15	210	267	78	87	300	369	669
							908	888	1796

Table XVII

Current Training Required for Present Job by Respondents According to Age

	AGES 18-25		26-35		36-45		46-55		56 & over		Combined		
	M (N=109)	F (N=141)	M (N=251)	F (N=257)	M (N=272)	F (N=223)	M (N=180)	F (N=180)	M (N=93)	F (N=94)	M (905)	F (895)	Tota (1800)
1. Business	13	9	27	11	45	11	31	15	7	6	123	52	175
2. Physical Sciences	6	0	31	0	42	0	24	2	11	1	114	3	117
3. Applied Industrial Arts & Technical Skills	6	1	28	0	31	2	19	0	10	0	94	3	97
4. Health Services (Including Nursing)	0	3	5	22	2	2	7	17	1	9	15	71	86
5. Social Sciences	0	0	2	0	7	4	7	2	0	1	16	7	23
6. Arts & Humanities (Including Foreign Languages)	0	0	0	3	6	1	3	1	0	1	9	6	15
7. Secretarial	0	7	0	11	1	7	0	15	0	3	1	43	44
8. Education	1	1	5	3	2	3	1	6	0	4	9	17	26
9. Degree or Diploma	21	27	44	28	74	18	27	19	8	12	174	104	278
10. Home Related Services	1	9	3	67	6	64	4	28	0	14	14	182	196
11. EDP	0	5	6	6	6	4	0	0	0	1	12	16	28
12. Communications	0	0	1	0	1	0	0	1	1	0	3	1	4
13. Miscellaneous	1	1	5	0	3	1	2	3	13	9	24	14	38
Blanks	60	78	94	106	46	88	55	71	42	33	297	376	673
											905	895	1800

When comparing male age vs. level of educational attainment and present job, there appears distinct correlations; however, such correlations are indicative of the educational level represented in the sample and would normally be expected to reflect such correlation values - that is, advanced formal degree-diploma training would be expected for technical business positions for men. Also, when comparing the same set of data for female respondents, the same holds true. Significant, however, is the inference that the total sample was from the "community" with a higher education than from the "community" as a whole.

VII. Refresher Courses Requested:

Additional refresher courses requested appear greater in the field of business than in any other field, followed by the physical sciences. It would appear that technological advances in industrial occupations have had considerable bearing on this type of request.

Requests to study in the arts and humanities area also appears high among respondents. Interpreted here would be an increased interest in such areas as art, music, drama, linguistics, foreign languages and the like which would fill the void created by the shorter work week, longer life span, and earlier retirement. Inherent within the arts and humanities is, however, the need to satisfy personal leisure interests through formal and informal studies.

Table XVIII

Additional Refresher Training Requested by Respondents According to Educational Status

	Educational Status								
	Less than 12 years		12 to 15 years		16 or more years		Combined		Total
	M (N=53)	F (N=33)	M (N=424)	F (N=602)	M (N=431)	F (N=253)	M (908)	F (888)	(1796)
1. Business	2	4	79	92	109	20	190	76	266
2. Physical Sciences	10	0	84	22	68	32	162	54	216
3. Applied Industrial Arts & Technical Skills	9	1	27	2	9	0	40	3	43
4. Health Services (Including Nursing)	1	3	4	56	8	9	13	68	81
5. Social Sciences	2	1	14	38	34	23	50	62	112
6. Arts & Humanities (Including Foreign Languages)	2	3	10	59	35	46	47	108	155
7. Secretarial	0	4	4	70	3	12	7	86	93
8. Education	0	0	2	9	8	36	10	45	55
9. Degree or Diploma	10	6	3	29	21	16	34	51	85
10. Home Related Services	2	4	29	33	7	11	38	48	86
11. EDP	0	1	15	65	15	3	30	69	99
12. Communications	1	1	18	34	28	29	47	64	111
13. Miscellaneous	0	0	8	8	9	8	17	16	33

Table XIX

Additional Refresher Training Requested by Respondents According to Age

	AGES												
	18-25		26-35		36-45		46-55		56 & over		Combined		
	M (N=109)	F (N=141)	M (N=251)	F (N=257)	M (N=272)	F (N=223)	M (N=180)	F (N=180)	M (N=93)	F (N=94)	M (905)	F (895)	Total (1800)
1. Business	11	7	67	14	83	30	25	22	4	3	190	76	266
2. Physical Sciences	24	8	42	28	61	13	34	2	1	3	162	54	216
3. Applied Industrial Arts & Technical Skills	10	0	11	2	14	1	8	0	2	0	45	3	48
4. Health Services (Including Nursing)	2	8	8	22	2	23	1	11	0	4	13	68	81
5. Social Sciences	5	8	19	17	16	19	10	10	0	8	50	62	112
6. Arts & Humanities (Including Foreign Languages)	4	17	15	37	17	23	11	24	0	7	47	108	155
7. Secretarial	1	13	4	26	2	41	0	1	0	5	7	86	93
8. Education	2	5	1	15	3	19	2	6	2	0	10	45	55
9. Degree or Diploma	6	7	12	19	15	17	0	4	1	4	34	51	85
10. Home Related Services	1	7	9	22	15	11	12	7	1	1	38	48	86
11. EHP	2	36	8	11	11	12	9	9	0	1	30	69	99
12. Communications	6	9	14	18	19	20	7	13	1	4	47	64	111
13. Miscellaneous	1	2	6	4	7	2	2	6	1	2	17	16	33

Data supports the inference that refresher training occurs among those with a higher level of education for males, but not necessarily for females. Inferred here, however, is the role of domesticity for females who are, at present, outside the labor market and for which refresher training is not needed for job security or for employment. However, the inference relates to a basic age group, and indirectly to refresher training.

VIII. Disabilities and Physical Limitations:

Physical disabilities on any large scale appear to be marginal within the population base of Beverly. Contributing to this relative low pattern is the absence of resident nursing homes or areas of long-term institutional care, which are apparent in border towns.

Vocational Rehabilitation and Massachusetts Association for the Adult Blind actively operate programs in the city. Other sponsors include member agencies of the United Fund, Visiting Nursing Association and various professional auxiliaries devoting energies to members within the group.

Some 1.2% of the population sample reported physical disability. Compared to national standards, cardiac ailments and heart disease appeared highest in the array, followed by arthritic conditions and amputations.

While a major part of the physical needs are handled by existing agencies, an extensive review of educational opportunities, if only for leisure oriented avenues or for personal gratification, for disabled residents should be done.

IX. Employment Status and Types:

Beverly, as noted earlier in this report, has a lower unemployed percentage of the population than does the Metropolitan Boston area - 3.4% as compared to 3.8% for the latter.

As noted in Graph I, the largest number of persons within the labor market who are not working and who are unemployed are within the semi-skilled areas. These areas of relative high unemployment consist of persons whose employment background has been in the field of operatives.[1]

The skilled labor area of unemployment consists largely of those who are incapacitated or who are in education or health programs and presently are not teaching or nursing - that is, housewives who are raising a family and hope to enter the labor market at some later time.

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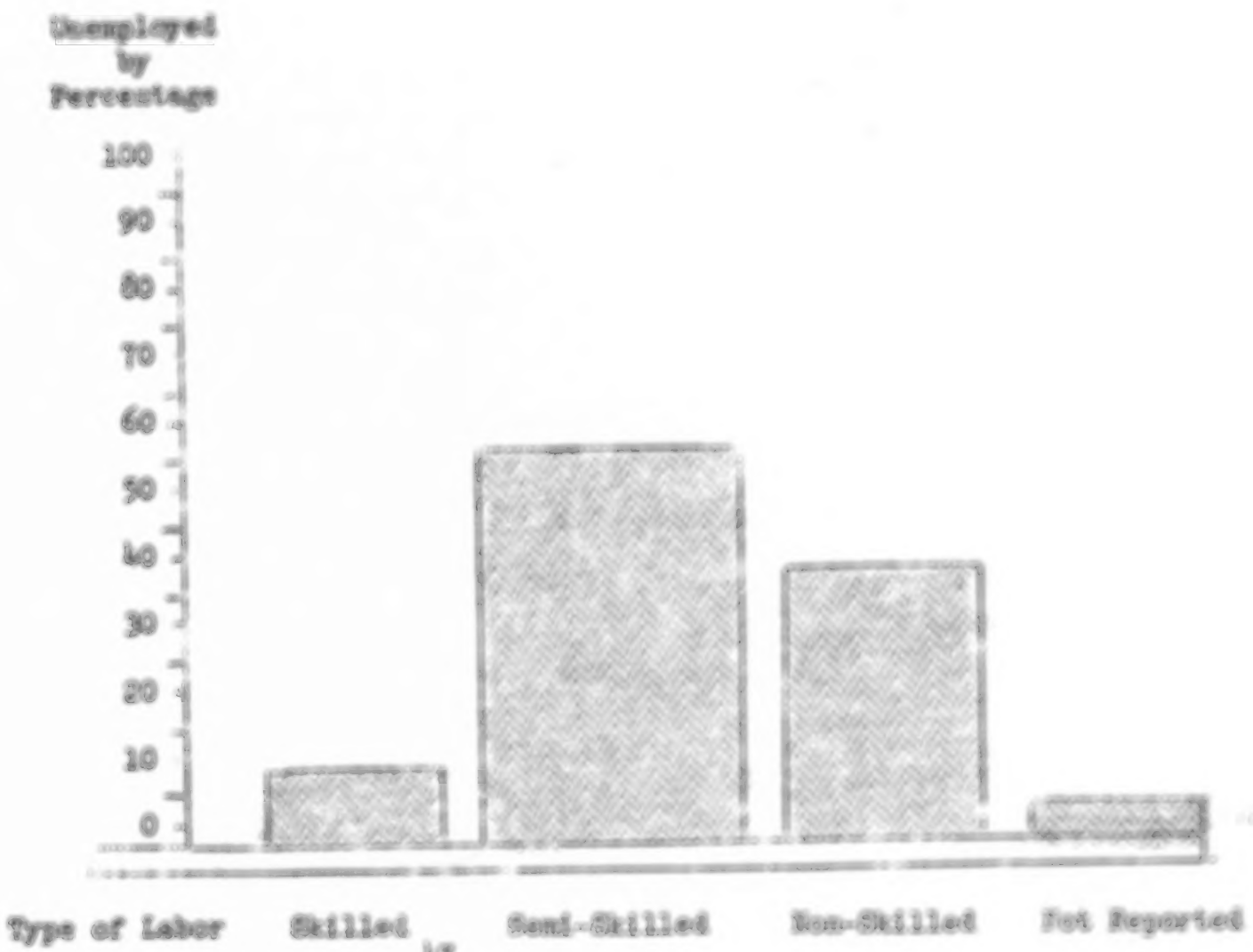
[1]Appendix VII.

GRAPH I

EXISTING SKILL LEVELS
WITHIN LABOR MARKET
WHO ARE UNEMPLOYED
CITY OF BEVERLY, MASS.



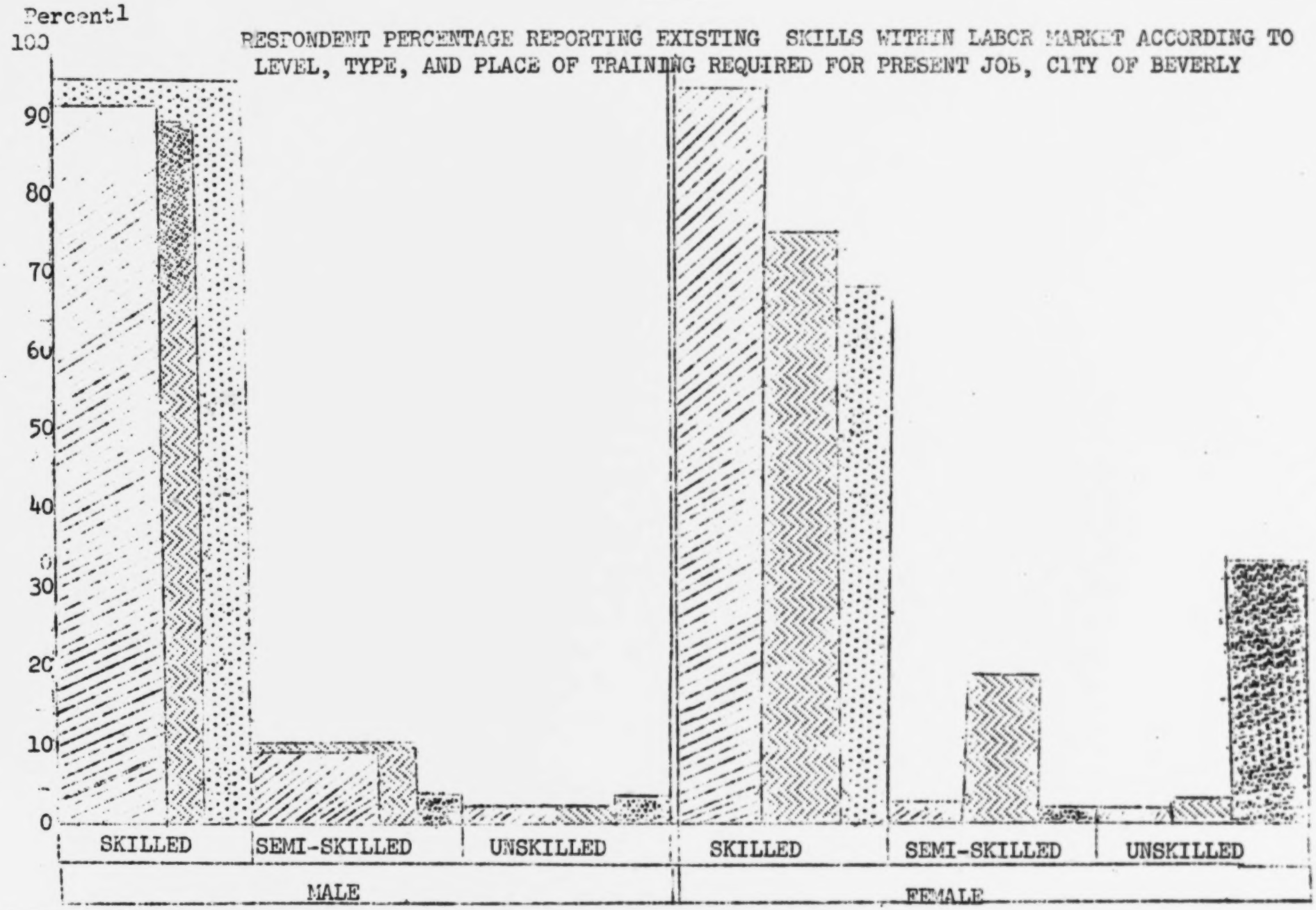
2

Existing Skill Levels

A technical skill has been demanded by employers by 92 percent of the female respondents and 91 percent of the male respondents currently in the labor force as noted in Graph 2. By virtue of the educational attainment by the respondents, such technical skills, as reported, would imply those encompassing a baccalaureate degree. Eighty-nine percent male and seventy-six percent female respondents indicate semi-skilled training has been required for their present employment and such training has been received off-the-job. Interpreted here, the demand for extra training implies that technological advances has created the personal or professional need for a higher skill level, an employment transfer into an allied area, or promotion within the employment administrative ranks.

GRAPH 2

RESPONDENT PERCENTAGE REPORTING EXISTING SKILLS WITHIN LABOR MARKET ACCORDING TO LEVEL, TYPE, AND PLACE OF TRAINING REQUIRED FOR PRESENT JOB, CITY OF BEVERLY



On-the-Job Training
Other Special Training
Level of Training Required for Present Job

[1]One hundred percent total represents the population sample and should not be interpreted as the total statistical universe which is the population aggregate of the City of Beverly.

CONCLUSIONS

1. The future stability of Beverly's economic and social base lies in her educational resources and the continued soundness of her existing social institutions. The continued development of resources for educational opportunities must be structured against the ever-changing needs of a highly mobile and economically active population. Characteristic of the educational structure should be the view that the population segment is culturally, socially, and morally aligned to a broad referral environment where each municipal unit is deeply aligned to the neighbor town or city. And, by the same token, economic influences felt individually and collectively, can only be sustained by an industrial and developmental climate where cooperation and coordination exist among all public, private and commercial enterprises.

2. The City of Beverly consists of a municipal aggregate of loosely hinged neighborhoods, severed by grey areas, and marked by ethnic differences, mores and customs. Traditional bonds of ethnic alignments are being severed; however, a traditional approach to problem solving among neighborhoods appears to lie in the strength or weakness of the basic social institution - the family. Consequently, problem areas - economic or social - flow into the total character of the city which assists or detracts from its overall viability and growth.

3. Urbanization, specialization, automation and mechanization are products of the Twentieth Century and the Nation, not excluding the city of Beverly, marked by a living pattern where leisure is the core, rather than the fringe of life. Subsequently, education, both formal and informal, on and off-the-job must serve a dual purpose in a dual community:

   a. To train individuals for an active and participating role in the economic environment, and

   b. To favor social-cultural developments through and by individual experiences.

4. The capability of furthering sound advancements in education, in industrial development, in social services, in community organization, is within the powers of Beverly's existing resources. Each holds a responsibility; however, each resource, tangible or intangible, cannot achieve the advancement as noted without reviewing its own programs and purposes against a traditional approach to community development. Tradition merits respect only if it is traditionally sound. As a victim, or sponsor of technological advancement, the municipality still holds a distinct proprietary relationship to overall community advancement through its overall educational response. Notwithstanding, a grandiose approach to training programs can, and should be, tempered to the individual, at all seasons, and for all ages, linked by the educationally oriented and the industrially sponsored community.

5. It is noted that education, and training, are fundamental for economic existence in today's society. More impcrtantly, however, when viewing education in general is the concept that training should encompass more than a "job opportunity" avenue, but preparation of the individual for wholesome living.

6. The fact that a large number of people have expressed an interest in obtaining additional training in the areas of Business and Physical Science despite the fact that large numbers have received both formal and on-the-job training in these areas is an indication of the rapid changes in these areas prompted by the keen competition that continues to exist in business and industry and the rewards that follow from successfully meeting the challenge. It is worth noting, however, that despite the large number of women whose formal education trained them for business, the number interested in additional training in the area has decreased considerably. Although it could be argued that this is because women's interests broaden more rapidly than men's as the families grow, a more plausible conclusion is that Business is still primarily controlled by men whereas the secretarial profession, where women's interest in additional training remains high, is regarded as a women's profession.

7. The marked low in interest in additional training in Applied Industrial Arts and Technical Skills, despite the large number of those who have not received a college degree, whose formal education prepared them for work in this area and who also received on-the-job training and additional training in the area, must be interpreted as a relatively slow rate of change in the area as well as little or no foreseeable improvement in one's financial position from such additional training. The security guaranteed by strong unions in this area may account for the lack of interest in additional training, but the trend toward automation in industry must also be acknowledged as a contributing factor. The large amount of on-the-job training in this area cannot be construed as a deficiency on the part of the school system to adequately prepare their students for the area. No school system can be expected to do so. On the other hand, the school system can and should be alert to trends, particularly in the area of Data Processing, Computer Technology, and related fields. The numbers who have received any kind of training in Data Processing is practically nil. And even the numbers indicating a desire to obtain additional training in Data Processing and Computer Related professions is far below the nationwide need - much less the anticipated need in the immediate area.

8. Women in the 26-45 age range, where the economics of the household are more stable, have more time to devote to a wide range of activities and judging from the large number who have received additional training in home related services as well as the Arts and Humanities, they take advantage of their time. The desire to maintain or expand one's economic independence has prompted an ever increasing interest in such training.

9. The relatively small number of respondents indicating an interest in obtaining additional training in the field of education compared with the number who have received formal training in education is significant. Although there may well be a number of valid reasons for this drop in interest, e.g., a specific interest in the major field, it is a reflection of the level of esteem in which teaching as such, methods courses in particular, is held as well as a recognition that little economic gain can be expected from such additional training. In our mind, this is an unfortunate situation since methods courses and courses in new techniques and the like are the very courses that serve as the link between teacher and student; and that a stifled interest in new techniques will eventually be reflected in inferior preparation of the student particularly at the elementary and secondary levels despite increased knowledge of the content a teacher may have.

10. The large number of respondents who simply indicated that they trained to obtain a degree or diploma plus the large number that indicated it was necessary for their job seems to us to be worth commenting on. We all know that it is a popular goal among high school graduates. Once one has graduated, the world opens up. But the fact that so many indicated that this was their training suggests that this was what they were actually taught. Study your lessons so you can pass, so you can graduate, so you can work, earn money, and enjoy life. It is a common but sad commentary and does suggest that an intensive educational and counseling program should be initiated in our schools to alert the student first that education, formal and informal, is a life-long pursuit, that it doesn't end with a diploma; and secondly, so that each student may have greater opportunity to explore his future as it were. For the college graduate, on the other hand, it is perhaps a more realistic comment; to wit, that the degree is what counted in their current position. A degree at the level of employment held by these men and women really makes the difference. The technical knowledge they apply does not require a college degree, necessarily, but the ability to approach problems intelligently, to get along with others, to communicate effectively, all these are generally subsumed under the general title of degree; and no doubt with justification.

11. Another significant statistic is the absence of interest in the areas classified as miscellaneous. The fields of social service, including police, firemen and recreation administration are not mentioned. And marine science was mentioned by only one person. That these service areas need to be made more attractive is already a well-known fact, but that marine science needs special training is not generally known to the public. Yet today, the degree of knowledge necessary to make the fishing industry a profitable and satisfying profession is staggering. Only recently has Massachusetts begun to do something about reestablishing an industry once vital and certainly can be made vital once more.

12. The large number of people, mostly women, who have received some sort of training in nursing or health related services, such as first aid, etc., and who still want such training despite the relatively low salaries for such employment is an indication of what can be done by effective publicity methods. To serve the ill is a noble profession, but no more noble than to assist others who, though physically well, may be groping and are groping for knowledge, for assistance with the problems of their children, for assistance when their property or life is endangered by criminals or fire, for assistance in assuming a degree of self-respect in their jobs or professions. All such services are equally as noble as nursing and could well be sold as effectively as nursing has been sold.

13. Although a relatively large number of respondents have received special training in home-related services (Tables XIV and XV) and a moderate number have indicated an interest in obtaining additional training in the area, the interest seems to be lower than the future and even the current need dictates. Plumbers, electricians, and carpenters, upholsterers, cleaners, and a variety of other services that are directed at home needs are scarce and will continue to become more so as the educational and skill levels of home-owners increase in an ever-widening variety of areas. The unions to which such service-men belong should become alerted to the widening demand for their services and plan to increase their numbers without endangering their economic position.

14. That only 15 of 1000 residents of Beverly who indicated a desire to receive announcements of special programs actually enrolled in courses is an indication of the difficulties involved in carrying education to the citizens in a form which they find desirable. There is no doubt that those who have been out of school for five years or more find the prospect of formal education a frightening one. All one need do is talk to any person over thirty who has enrolled in a college course for the first time. The fear of failure is universal. The problem of making education as attractive as skiing as a leisure pursuit without disemboweling a course of knowledge is a very great one, one which educators have far too long failed to cope with. Other reasons, of course, indicate the

kinds of programs offered, and this requires direct contact between those seeking additional education and those responsible for providing it. Not all programs should be designed around public community needs of the present and future. The potential student has a say, one which must be heard. It is hoped that the second phase of this program; namely the interviewing of those who wish it, will shed some small light on this problem.

15. Finally, there is the economics of education -- time and finances. However, if the economics is viewed against a backdrop of professional and personal improvement, the ultimate goal for continued, formal and informal study is a direct one and economics, per se, becomes marginal.

COMMENTS AND RECOMMENDATIONS

"It has been predicted that in 1975 some three-fourths of our labor force will be producing goods and services that have not yet been developed. Unless education -- and other public and private policy makers -- demonstrate unusually keen foresight, our future economic and technological achievements could be tarnished by a large and growing measure of inadequately or inappropriately prepared workers.

If the challenges of the future are to be met, business and education must in fact greatly increase their interaction."[1]

The principal problem facing business and education as indicated by the results of this survey is that of stimulating the citizenry to seek out education and training -- in fact demand it. A large scale publicity program seems to be called for, but which form such a program should take needs to be carefully but promptly studied and weighed.

Some of the areas in which the citizenry should be encouraged to seek knowledge and in which business and education must cooperate are easily identified; namely Data Processing and Computer education related skills, communications skills, the area of education proper; especially educational methods utilizing the new technology, social services including police, fire, marine science, social welfare, mental health, and the like, and the home related services.

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[1]Excerpt from a speech by M.A. Wright, President of the U.S. Chamber of Commerce, at Shaw University in Raleigh, North Carolina, on February 13, 1967.

Business and Industry can do much by way of assisting the educator in finding the best possible formula for education at all levels and for all ages. On the other hand, the educator can perform a significant service to industry including employers by aiding in the development of training programs designed to meet the needs of the employee faced with changing production requirements, particularly as the use of automation increases on all industrial fronts. Shared cost programs to enable employees to take advantage of educational opportunities not even related to the production plans of the industry is only one of many programs that may serve as an incentive.

With respect to educational level, a basic assumption is that the more education one attains, the more responsive one is to completing questionnaires and the more interested in obtaining additional education. It is apparent that other methods will have to be adopted to incite individuals with relatively less formal education to want more. A further step in this project suggests the personal communication approach and a continuation of this study.

PART III

APPENDICES

THE COMMONWEALTH OF MASSACHUSETTS
NORTH SHORE COMMUNITY COLLEGE
BEVERLY 01915

January 23, 1967

MAY WE HAVE FIVE MINUTES OF YOUR TIME?

Dear Resident:

This survey is being conducted by personnel at the North Shore Community College with the support of Federal funds and with the cooperation of the Beverly Chamber of Commerce.

The purpose of the survey is to determine the number of residents in the city of Beverly who have had specialized training, and the kinds of specialized training they have received. This information will be invaluable for three reasons:

a. To aid in determining what courses should be offered in the Division of Continuing Studies (Evening Division) at the North Shore Community College;
b. To provide the Chamber of Commerce with the kind of information necessary to attract new industry to the area; and most important of all,
c. To increase the earning power for you, the resident.

In order to obtain the needed information, would you kindly complete the enclosed form? All you need do is answer the questions on the form, fold, seal, and drop it in the nearest mail box.

Three forms are enclosed. Only those who are over 18 years of age should complete a form. If you need additional forms for members of your household who are over 18 years of age, call 927-2123 or 927-2125 and they will be sent to you.

Thank you for your time.

Sincerely,

Enclosures

Harold L. Shively
President

NORTH SHORE COMMUNITY COLLEGE
Beverly, Massachusetts
TRAINING AND EDUCATION SURVEY

With the Support of Title I, of the Higher Education Act of 1965 and in cooperation with the Beverly Chamber of Commerce.

1. Marital status: Married ( ), Single ( )
2. Date of Birth: Day _____ Month _____ Year _____
3. Sex: Male ( ), Female ( )
4. Completed elementary school? Yes ( ), No ( )
5. Completed high school? Yes ( ), No ( )
6. Number of years beyond high school: None ( ), 1 ( ), 2 ( ), 3 ( ), 4 ( ), 5 or more ( )
7. What did you train for during your last year of school?_____
8. What on-the-job training have you had?_____
9. What other special training have you received (for example, electronics, real estate, first aid, etc.)?
_____
10. What kind of training was required for your present job?_____
11. What additional or refresher training would you like to have? (If more than one, put in order of preference.)_____
12. If you are not working at the present time, would you be interested in a guidance-placement service? Yes, ( ), No ( ) Does not apply ( )
13. Special training programs are available for those who have physical disabilities. If you have a physical disability, indicate (a) the type; and (b) degree to which your activities are limited.
    (a) Type of disability _____
    (b) Degree of limitation _____

If you are interested in receiving announcements of special programs to be offered by the North Shore Community College, please print name and address below.

Name _____

Address _____

APPENDIX II

Occupational Titles

Occupational classification of jobs performed and categorized into thirteen areas according to the Dictionary of Occupational Titles, Volumes I and II, prepared by the United States Employment Service, Division of Occupational Analysis, Washington, D.C.

BUSINESS

Accounting

Account Analyst

Advertising

Auditor

Banking

Bookkeeping

Business Administration

Business Education

Business Management

Business Practice

Clerical

Commercial

Control, Production & Quality

Cost Analysis

Credit

Economics

Factory Management

Finance

Hotel Management

Inventory Management Control

Investment Banker

Logistics

Management Training

Marketing

Merchandising

Modern Office Procedures

Mutual Funds

Payroll Clerk

Production Methods

Purchasing Agent

Retailing

Retail Merchandiser

Sales

Salesperson

PHYSICAL SCIENCES

Aeronautics

Air Conditioning Engineer

Astronomer

Chemistry

Construction

Draftsman

Electronics

Electrophysics

Engineers -
Chemical

Civil

Electrical

Flight

Engineers-
Industrial

Mechanical

Nuclear

Research

Sanitary

Stationary

Structural

Steam

Textiles

Forms Design

Geography

Heat Engineering

Mathematics

Meterology

Missiles

Physics

Physicist

Probability Theory

Radar

Radio

Science

Surveying

APPLIED INDUSTRIAL ARTS AND TECHNICAL SKILLS

Air Conditioning - Installer
Mechanic

Air Force

Airline Mechanic

Air Traffic Controller

Army

Auto Body Worker

Auto Mechanic

Blueprint Reading

Brick Mason

Cabling (Elec. Co.)

Carpenter

Cartography

Chemical Processing

Coast Guard

Colormaker (Dyer)

Diesel Engines

DOD Technical Schools

Drawing (Mechanical)

General Shop

Glass Technology

Industrial Arts

Laboratory Tester

Lens Grinding &
Polishing

Lithography

Machine Operator

Machine Shop & Design

Machinist

Metalography--Metallurgy

Patternmaker

Pilot

Plumber

Practical Arts

Printer

Refrigeration

Sheet Metal Worker

Shop Course

Soldering

Steamfitting

Tanning, Leather

Tool & Die Maker

Trade School

Truck Driver

TV

Welding

Wiring

X-Ray Technology

HEALTH RELATED SERVICES

Anatomy
Bacteriology
Biochemistry
Biology
Cardiology
Chiropractor
Dental Hygienist
Dental School
Dietician
First Aid
Fcod Technician
Health
Medicine
Nutrition
Optician
Paramedics
Pharmacist
Physician
Physical Education
Physical Therapist
Physiology
Public Health
Red Cross Training
Safety
Technicians - Dental
- Histology
X-Ray Technician

NURSING

Nurses - Aid
Anesthetist
General Duty
Head
Instructor
Licensed Practical Nurse
Practical
Private
Nursing Refresher
Nursing School

SOCIAL SCIENCES

American History
Archeology
Attorney
Boy Scouting
Civics
Community Planning
Counseling
Criminology
Estate Planning
Four-H Leader
Girl Scouts
Guidance Courses
Historian
History
Human Relations & Behavior
Labor Relations
Law
Life Guard
Operations Research
Pathology
Peace Corps
Personnel & Psychometrics
Psychology
Public Relations
Social Worker
Social Studies
Sociologist
Sociology
Tests & Measurements
Urban Renewal
Welfare Worker

HUMANITIES

Architecture

Art

Ceramics

Cinema

Creative Thinking

Dramatics

French

German

Greek

Hobby Crafts

Humanities

Languages

Literature - American

- English

Music

Oil Painting

Painter

Philosophy

Piano

Russian

Spanish

Theatre

SECRETARIAL

Receptionist

Secretary

Shorthand

Stenotype

Switchboard Operator

Teletype

Typing

Typist

FORMAL EDUCATION

Education

Nursery (Kindergarten)

Professor

Student

Teacher

DEGREE OR DIPLOMA

Apprentice (General)

B. S. Degree

College Degree

College Preparatory

College Student

General

High School

Liberal Arts

Master's Degree

Ph. D.

COMPUTER ORIENTED

Computer Programming

IBM Machines

Keypunch Operator

Office Machines

COMMUNICATIONS

Business English

Commercial

Dale Carnegie Public Speaking Course

English

Graphic Arts

Graphoanalysis

Information Systems

Intelligence (Military)

Journalism

Newspapers

Reporter

Semantics

Speech

Speed Reading

Technical Writing

Writing

HOME RELATED SERVICES

Baker

Barber

Butcher

Cook

Cosmetologist

Dressmaking

Drivers Education

Fashion Design

Home Economics

Home Management

Housewife

Income Taxes

Insurance

Interior Decorator

Jewelry

Landscaping

Librarian

Photographer

Photography

Real Estate

Sewing

Stewardess

Tailoring

Taxation

Taxi Driver

Telephone Operator

Waitress

MISCELLANEOUS

Agriculture

Animal Husbandry

Archivist

Bible Education

Botany

Clergyman

Church Work

Civil Defense

Dancing

Fireman

Foreign Service

Forestry

Government

Horticulture

International Affairs

Library Courses

Mail Clerk

Manpower Trng. & Dev. Act

Marine Techniques

Merchant Marine

Navigation

Navy

Police

Police Science

Political Science

Quality Assurance Representative

Religion

Seminary

Ski Instructor

Telephone Co. Service Rept.

Theology

Traffic Management

Undercover Agent

WAVES